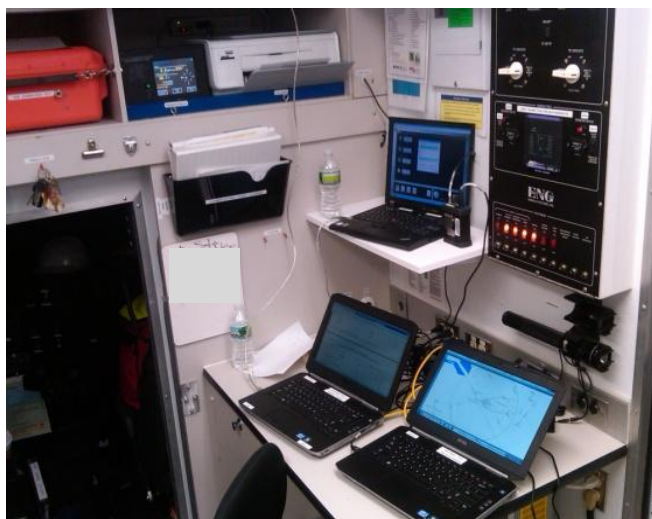
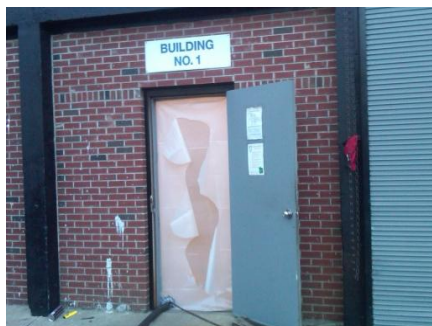


MassDEP Field Assessment and Support Team

Framingham – General Chemical Facility

June 26, 2012

Air Monitoring During Pilot Test for Facility Decontamination Operations



BACKGROUND

On June 26, 2012, the Massachusetts Department of Environmental Protection (MassDEP) Field Assessment and Support Team (FAST) deployed its mobile laboratory to the General Chemical facility at 133 Leland Street in Framingham, to monitor air emissions during a 4 hour pilot test of facility decontamination procedures.

Decontamination operations were conducted in two specific areas of the facility: inside of Building No. 1, and inside of Tank No. 5, as shown in Figures 1 and 2.



Figure 1 – Decontamination Pilot Test Locations – Aerial View

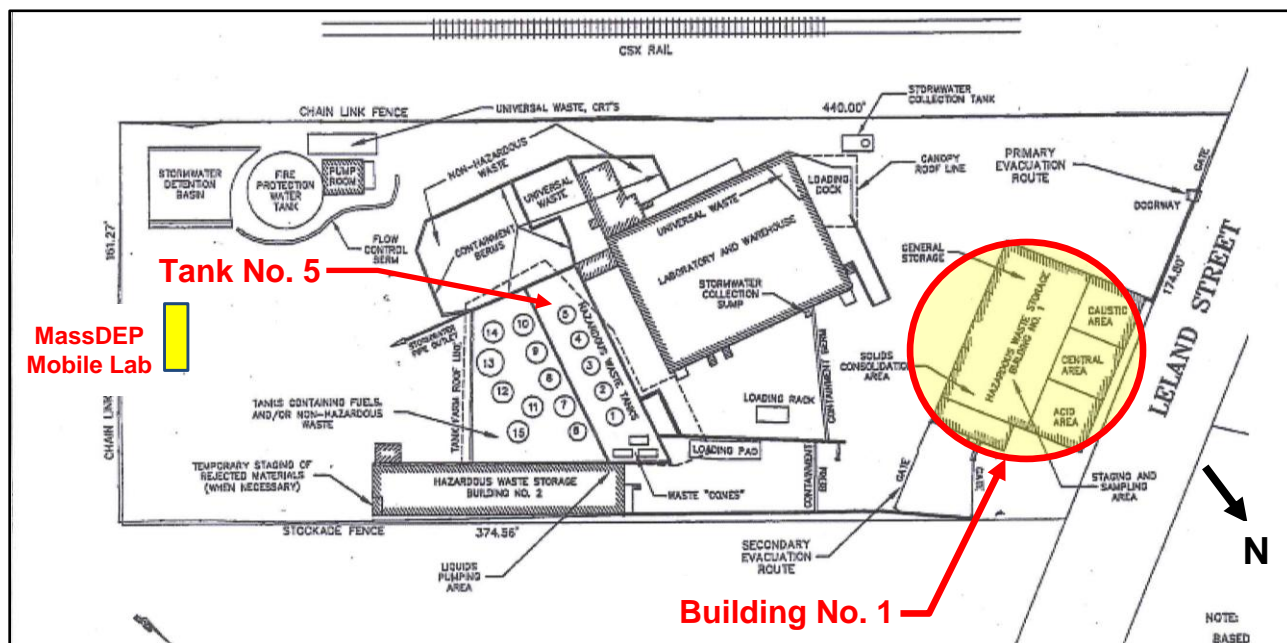


Figure 2 – Decontamination Pilot Test Locations – Facility Plan

Decontamination steps, consisting primarily of applying “Simple Green” and power washing surfaces, was conducted in accordance with the “Facility Closure Plan”, revised as of June 15, 2012, and as approved by MassDEP in a letter dated June 21, 2012.

Cleaning operations were initially conducted inside of Building No. 1, starting at about 8:15 PM and ending about 9:45 PM. Operations then moved easterly to the above-ground storage tank area, where workers cleaned and pressure-washed the inside surface of Tank No. 5, from about 10:30 PM to 12:00 midnight.

WEATHER CONDITIONS

Meteorological conditions for Framingham for June 26th are provided in Figure 3.

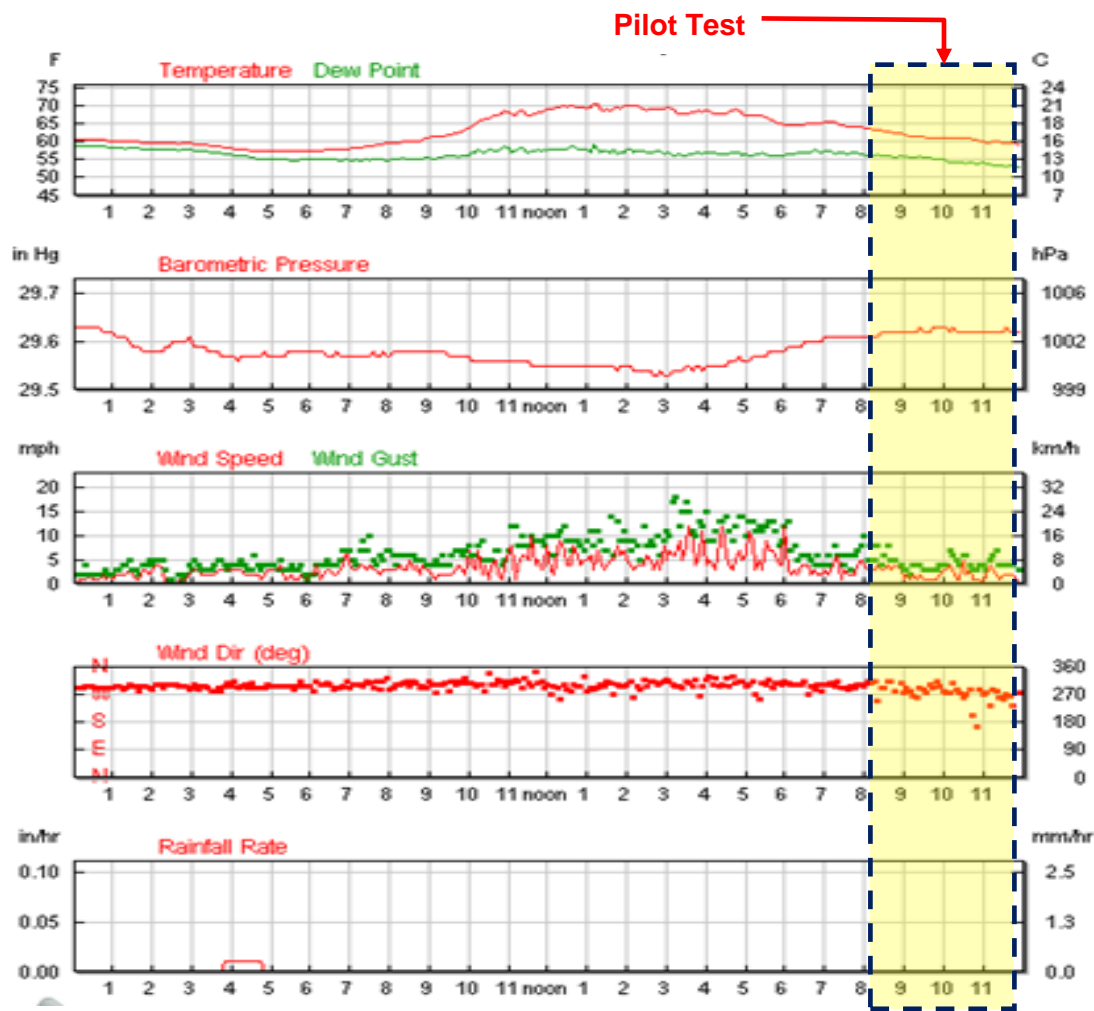


Figure 3 – Meteorological Data for Framingham (*Weather Underground* station KMAFRA16)

Meteorological data were also obtained on-site using a Coastal Systems *Weatherpak MTR* unit attached to a 10 meter mast on the MassDEP mobile laboratory. These data were consistent with the values provided in Figure 3; most importantly, 2 – 8 MPH westerly winds throughout the pilot test, with a slight shift to southwesterly winds after 10 PM. Note that while the regional and site-scale wind direction was from the west/southwest, there may have been some eddies produced by the presence of buildings and structures at the site that may have resulted in transient/micro-scale reversals in wind direction, although such conditions are not believed to have significantly impacted findings. Similarly, while there was a very brief period of light rainfall between 8:30 and 9:00 PM, the effects on the pilot study air monitoring effort were insignificant.

AIR MONITORING BY PRIME ENGINEERING

Personnel from Prime Engineering, working on behalf of General Chemical, were on site during the pilot test to implement the air monitoring program articulated in the MassDEP 6/21/12 approval letter. This consisted of the placement of 4 evacuated (“Summa”) air canisters and 3 dust monitoring devices for each part of the pilot test, as well as a high-volume particulate sampler downwind of Building No. 1. The exact locations of these sampling points, depicted in Figure 4, were determined in the field by MassDEP personnel, based upon wind conditions at the initiation of pilot activities.

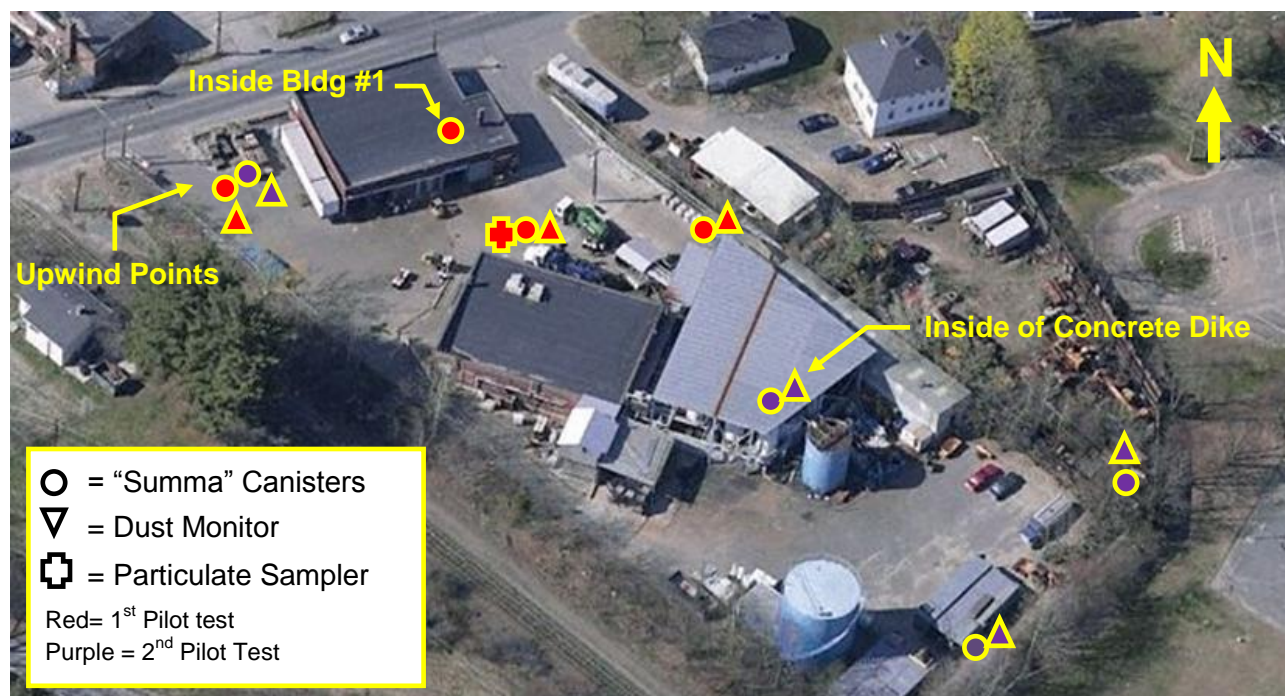


Figure 4 – Location of Air Sampling Points for Prime Engineering, 6/26/12

Care was exercised by Prime Engineering personnel to start and stop active sampling to coincide with the start and stop of actual cleaning operations. As such, each evacuated (“Summa”) canister and the high volume particulate sampler was activated for about 1.5 hours.

AIR MONITORING BY MassDEP

The MassDEP mobile laboratory was stationed on the easterly side of the property during both pilot test operations, as depicted in Figures 1 and 2.

A tiered air monitoring approach was undertaken by agency personnel during invasive cleaning activities, including the use of:

- hand-held meters to periodically check air quality in and down-wind of cleaning operations, to quickly identify potential emissions of concern;
- 4 stationary RAE Systems “AreaRAE” monitors, which continuously analyzed the air for explosive gases (Lower Explosive Limit), Volatile Organic Compounds (via a 10.6 eV Photo-ionization Detector), Hydrogen Sulfide, and Chlorine gas, and transmitted data every 2 seconds to a laptop computer located in the DEP mobile laboratory;
- an SRI gas chromatograph with in-series Photo-ionization and Electrolytic Conductivity

Detectors (GC/PID/ELCD), to provide initial, tentative identification and quantification of common petroleum constituents and chlorinated hydrocarbon solvents;

- an Inficon HAPSITE Gas Chromatograph with a Mass Spectrometer detector (GC/MS), to provide more definitive “parts per trillion” identification and quantification of 35 common volatile organic air contaminants, along with the tentative identification and quantification of more than 100,000 additional chemical contaminants; and
- a Thermo MIE pDR-1500 Dust and Aerosol Monitor, optimized to respond to particulates in the range of 1 to 10 microns, to ascertain whether significant levels of particulates or aerosols were present at the easterly (downwind) perimeter of the site.

While focusing primarily on “worst case” locations at and immediately down-wind of cleaning operations, some sampling and data points were located in upwind and/or perimeter locations, to provide a wide array of coverage.

The location of the *AreaRAE* monitors, dust monitor, GC/PID/ELCD, and GC/MS air sampling points are provided in Figure 5.

MassDEP AIR MONITORING RESULTS AND DATA

Air monitoring data is typically expressed in units of parts per million by volume (ppmV), parts per billion by volume (ppbV), or $\mu\text{g}/\text{m}^3$. Note that 1 ppmV = 1000 ppbV, and that concentration values can be converted between ppmV or ppbV and $\mu\text{g}/\text{m}^3$ based upon the molecular weight of the chemical.

For clarity, data in this report will be presented in units of ppbV, except for

- Output data for the *AreaRae* monitors, which are in units of ppmV for chemical constituents, and percent (%) for explosive gases (i.e. Lower Explosive Limit); and
- Elemental mercury data, which is reported in units of ng/m^3 (approximately *parts per trillion by volume or pptV*).

$$1 \text{ ppmV} = 1000 \text{ ppbV} = 1,000,000 \text{ pptV}$$
$$1\% = 10,000 \text{ ppmV}$$

Hand-Held Meters

MSA Sirius Meter – Elevated readings on the Photoionization (PID) sensor were noted in Building No. 1, both prior to cleaning operations (approximately 9800 ppbV), and during cleaning operations (8400 ppbV). There were no detectable levels (at a detection limit of 100 ppbV) outside the building. During operations to clean Tank No. 5, PID readings near the tank opening were noted to be in the range of 100 to 200 ppbV. There were no detectable levels in areas more than 50 feet from the tank, although there was a discernible odor in the tank farm (diked) area.

V-RAE Meters – There were no detectable levels of Hydrogen Sulfide, explosive gases, Hydrogen Cyanide, or Ammonia anywhere on the site during cleaning operations. There were periodic traces of Chlorine gas at the detection limit of the meter (100 – 200 ppbV) on different areas of the site, including the upwind boundary. As such, the Chlorine readings appear to be either (i) a “background” condition unrelated to materials or activities at the site, or (b) a “false positive” meter response to some other (interfering) chemical compound.



Figure 5– Location of Air Sampling Points for MassDEP, 6/26/12

Regardless of the existence or source, the US EPA “no effects” *Acute Exposure Guideline (AEGL)* for the general public for chlorine is 500 ppbV.

Lumex Mercury Meter – Levels of elemental mercury were detected within Building No. 1, in the range of 830 to 840 ng/m³, and as high as 930 ng/m³. Levels in all other (outdoor) areas of the site were less than 5 ng/m³. Background levels of mercury in ambient air are generally less than 20 ng/m³. The Massachusetts Department of Public Health and the US ATSDR consider levels of elemental mercury less than 1000 ng/m³ to be acceptable for residential dwellings and schools. Note that 1 ng/m³ is approximately 1 *part per trillion*.

AreaRAE Stationary Continuous Air Monitors

As depicted in Figure 5, *AreaRAE* units DEP-1, DEP-2, and DEP-3 were deployed in the same location – attached to the perimeter fence - throughout both pilot tests (i.e., from 8 PM to midnight). Unit DEP-4 was positioned down-wind of Building No. 1 from 8 PM to 10 PM (position DEP-4/1), and was then moved to be down-wind of Tank No. 5 from 10 PM to 12 midnight (position DEP-4/2).

The data from the four units are provided below in Table 1. Note that although the *AreaRAE* units produce data every 2 seconds, for the sake of brevity, and to provide better comparisons to health-based metrics, these data are presented below as average values over a 15 minute period.

Table 1 – AreaRAE Data during Pilot Test

DEP -1				
Date and Time	15 min avg concentration			
	VOCs	H ₂ S	LEL	Cl ₂
	ppmV	ppmV	%	ppmV
6/26/2012 19:27	0	0	0	0.1
6/26/2012 19:42	0	0	0	0.1
6/26/2012 19:57	0	0	0	0.1
6/26/2012 20:12	0	0	0	0.1
6/26/2012 20:27	0	0	0	0.1
6/26/2012 20:42	0	0	0	0.1
6/26/2012 20:57	0	0	0	0.1
6/26/2012 21:12	0	0	0	0.2
6/26/2012 21:27	0	0	0	0.1
6/26/2012 21:42	0	0	0	0.1
6/26/2012 21:57	0	0	0	0.1
6/26/2012 22:12	0	0	0	0.1
6/26/2012 22:27	0	0	0	0.1
6/26/2012 22:42	0	0	0	0.1
6/26/2012 22:57	0	0	0	0.1
6/26/2012 23:12	0	0	0	0.1
6/26/2012 23:27	0	0	0	0.1
6/26/2012 23:42	0	0	0	0.2
6/26/2012 23:57	0	0	0	0.1
6/27/2012 0:12	0	0	0	0.2
DETECTION LIMIT	0.1	1	1	0.1

DEP -2				
Date and Time	15 min avg concentration			
	VOCs	H ₂ S	LEL	Cl ₂
	ppmV	ppmV	%	ppmV
6/26/2012 19:27	0	0	0	0
6/26/2012 19:42	0	0	0	0
6/26/2012 19:57	0	0	0	0
6/26/2012 20:12	0	0	0	0
6/26/2012 20:27	0	0	0	0
6/26/2012 20:42	0	0	0	0
6/26/2012 20:57	0	0	0	0
6/26/2012 21:12	0	0	0	0
6/26/2012 21:27	0	0	0	0
6/26/2012 21:42	0	0	0	0
6/26/2012 21:57	0	0	0	0
6/26/2012 22:12	0	0	0	0
6/26/2012 22:27	0	0	0	0
6/26/2012 22:42	0	0	0	0
6/26/2012 22:57	0	0	0	0
6/26/2012 23:12	0	0	0	0
6/26/2012 23:27	0	0	0	0
6/26/2012 23:42	0	0	0	0
6/26/2012 23:57	0	0	0	0
6/27/2012 0:12	0	0	0	0
DETECTION LIMIT	0.1	1	1	0.1

Table 1 – AreaRAE Data during Pilot Test (continued)

DEP -3					DEP -4				
Date and Time	15 min avg concentration				Date and Time	15 min avg concentration			
	VOCs	H ₂ S	LEL	Cl ₂		VOCs	H ₂ S	LEL	Cl ₂
	ppmV	ppmV	%	ppmV		ppmV	ppmV	%	ppmV
6/26/2012 19:27	0	0	0	0.1	6/26/2012 19:27	0	0	0	0
6/26/2012 19:42	0	0	0	0.1	6/26/2012 19:42	0	0	0	0
6/26/2012 19:57	0	0	0	0	6/26/2012 19:57	0	0	0	0
6/26/2012 20:12	0	0	0	0.1	6/26/2012 20:12	0	0	0	0
6/26/2012 20:27	0	0	0	0	6/26/2012 20:27	0	0	0	0
6/26/2012 20:42	0	0	0	0	6/26/2012 20:42	0	0	0	0
6/26/2012 20:57	0	0	0	0.1	6/26/2012 20:57	0	0	0	0
6/26/2012 21:12	0	0	0	0.1	6/26/2012 21:12	0	0	0	0
6/26/2012 21:27	0	0	0	0	6/26/2012 21:27	0	0	0	0
6/26/2012 21:42	0	0	0	0.1	6/26/2012 21:42	0	0	0	0
6/26/2012 21:57	0	0	0	0	6/26/2012 21:57	0	0	0	0
6/26/2012 22:12	0	0	0	0	6/26/2012 22:12	0	0	0	0
6/26/2012 22:27	0	0	0	0.1	6/26/2012 22:27	0	0	0	0
6/26/2012 22:42	0	0	0	0	6/26/2012 22:42	0	0	0	0
6/26/2012 22:57	0	0	0	0	6/26/2012 22:57	0	0	0	0
6/26/2012 23:12	0	0	0	0	6/26/2012 23:12	0	0	0	0
6/26/2012 23:27	0	0	0	0	6/26/2012 23:27	0	0	0	0
6/26/2012 23:42	0	0	0	0.1	6/26/2012 23:42	0	0	0	0
6/26/2012 23:57	0	0	0	0	6/26/2012 23:57	0	0	0	0
6/27/2012 0:12	0	0	0	0.1	6/27/2012 0:12	0	0	0	0
DETECTION LIMIT	0.1	1	1	0.1	DETECTION LIMIT	0.1	1	1	0.1

In Table 1, a zero value indicates a lack of detection above the sensor's minimum detection limit, as specified in the last row. As can be seen, all data for VOCs, Hydrogen Sulfide (H₂S), and Lower Explosive Limit (LEL) were zero. As with the hand-held (V-RAE) meter, periodic low-level detections of Chlorine (Cl₂) were noted on DEP-1 and DEP-3.

The data in Table 1 demonstrate that there were no significant emissions of monitored contaminants at the site perimeter over the course of the pilot test, at the detection limits of the instrument sensors (e.g., 100 ppbV for Volatile Organic Compounds). To further explore the possibility of emissions less than these detection limits, grab air samples were obtained as depicted in Figure 5 for analysis on gas chromatographs (GCs).

Data from Gas Chromatographs

Screening data from the GC/PID/ELCD indicated the presence of a number of chemicals in Building No. 1 air, which was then analyzed by the GC/MS for a more definitive evaluation. The other data points from the GC/PID/ELCD (outside Building No. 1; then near and downwind of Tank No. 5) did not show significant levels of air contaminants.

Data from the GC/MS are summarized in Table 2. Individual data reports are attached.

Table 2 – Site Chemicals and Other Compounds Detected in Air by GC/MS, ppbV¹

Analyte ²	005	006	007	008	009	010	011	012	013	RL ³
	6:50 PM	7:20 PM	8:15 PM	8:50 PM	9:00 PM	9:35 PM	11:00 PM	11:10 PM	10:50 PM	
Vinyl Chloride	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5
Chloroethane ⁴	7.2	6.1	N.D.	20.5	42.6	N.D.	N.D.	2.4	6.5	5
Trichloromonofluoromethane	N.D.	N.D.	<i>28.1</i>	N.D.	35.4	N.D.	N.D.	N.D.	N.D.	30
1,1-Dichloroethene	N.D.	N.D.	<i>0.3</i>	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1
Methylene Chloride	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	35.2	N.D.	44.4	N.D.	N.D.	N.D.	N.D.	1
Cis 1,2-Dichloroethylene	N.D.	N.D.	36.3	N.D.	37.8	N.D.	N.D.	N.D.	N.D.	1
Chloroform	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1
1,2-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5
1,1,1-Trichloroethane	N.D.	N.D.	10.8	N.D.	13.5	N.D.	N.D.	<i>0.5</i>	N.D.	1
Benzene	N.D.	N.D.	N.D.	N.D.	<i>0.5</i>	N.D.	N.D.	N.D.	N.D.	1
Carbon Tetrachloride	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1
Trichloroethylene	N.D.	N.D.	3.4	N.D.	5.4	N.D.	<i>0.3</i>	N.D.	<i>0.6</i>	1
1,1,2-Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1
Toluene	N.D.	N.D.	18.9	<i>0.3</i>	19.5	<i>0.3</i>	<i>0.3</i>	N.D.	<i>0.3</i>	1
Tetrachloroethylene	N.D.	N.D.	28.4	N.D.	30.9	N.D.	<i>0.3</i>	<i>0.5</i>	<i>0.3</i>	1
Chlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1
Ethylbenzene	N.D.	N.D.	<i>0.8</i>	N.D.	1.1	N.D.	N.D.	N.D.	N.D.	1
p/m-Xylene	N.D.	N.D.	2.0	N.D.	2.1	N.D.	N.D.	N.D.	N.D.	1
Styrene	N.D.	N.D.	N.D.	N.D.	28.2	N.D.	N.D.	N.D.	N.D.	1
o-Xylene	N.D.	N.D.	1.5	N.D.	1.9	N.D.	N.D.	N.D.	N.D.	1
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5
1,2,4-Trichlorobenzene	N.D.	N.D.	<i>1.5</i>	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5
HexachloroButadiene	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5
2-Butoxyethanol ⁵					20	<1				NA ⁶
Cyclohexane ⁵			1700		3000	<1				NA
Acetone ⁵			500		600					NA
Hexane ⁵							10	10		NA
Methylpentane (2, and 3-) ⁵			800		500					NA
2,4-Dimethylheptane ⁵									10	NA

Table 2 - Footnotes

- ¹N.D. = Not Detected; italicized values are estimated concentrations less than the Reporting Limit
- ²Purple Shaded rows are chemicals that were reportedly formerly stored at the facility
- ³RL = Analytical Reporting Limit (i.e., the minimum concentration that a contaminant can be reliably *quantified* – lower levels can be *detected*, but their concentrations can only be estimated)
- ⁴Chloroethane is often found in air sampling bags analyzed by the HAPSITE GC/MS, and is thought to be a sampling bag or system contaminant, and therefore not present or present at lower levels
- ⁵Orange shaded rows are chemicals that are not method analytes, but are tentatively identified by their mass spectra, and roughly quantified based upon the response of an internal standard
- ⁶NA = Not Applicable

The data summarized in Table 2 includes all detected Method Analytes, with values above the Reporting Limit in bold font, and trace levels less than the Reporting Limit in italicized font. As indicated, 24 of the 35 Method Analytes were detected in one or more air samples, including 20 chemical compounds that were known to have been stored at the facility.

8 PM to 10 PM – Cleaning Operations in Building No. 1

Not surprisingly, the highest level of contamination was found within the indoor air of Building No. 1, consisting of Sample #007, obtained at 8:15 PM just before cleaning operations were initiated, and Sample #009, obtained at 9:00 PM, during a brief break in cleaning operations. In both of these samples, an aliphatic compound tentatively identified (via mass spectra) as Cyclohexane dominated the sample chromatogram, at an estimated concentration of 1700 and 3000 ppbV, respectively. There were also elevated levels of Acetone and what appeared to be two other aliphatic hydrocarbons, 2-Methylpentane and 3-Methylpentane.

The origin of the aliphatic compound tentatively identified as Cyclohexane is unclear. Reportedly, *Cyclohexanone* was stored at the facility; it is possible that the Cyclohexane is an impurity and/or breakdown product of this material. Or, it may have been used in another product as a solvent, or even an ingredient in a cleaning agent - as could be the case for the Methylpentanes. Conversely, Acetone is a chemical that was disclosed to have been stored at the facility in the past.

The remainder of contaminants detected within Building No. 1 were present at less than 50 ppbV, including a number of chemicals that had reportedly been previously stored at the site. Finally, another compound of interest, 2-Butoxyethanol - an ingredient in Simple Green - was not detected in the air prior to cleaning operations (Sample #007), but was detected at an estimated concentration of 20 ppbV during cleaning operations (Sample #009). It was not detected in any other sample.

It is noteworthy that the total concentrations of Volatile Organic Compounds (VOCs) identified in Building No. 1 (3000 – 4000 ppbV range) are consistent with the elevated PID meter readings for Building No. 1 (8000 – 9000 ppbV range).

Despite the elevated contaminant concentrations within Building No. 1, no significant levels of VOCs were detected in nearby/downwind samples #008 and #010, which contained only a trace of Toluene, and, in sample #008, a concentration of 20.5 ppbV of Chloroethane – a compound believed to be a contaminant in the air sampling bags used.

Once again, the low levels of VOCs in samples #008 and #010 are consistent with the low levels of VOCs (<100 ppbV) recorded by the PID sensor in hand held instruments and in the the *AreaRAE* units at these locations (i.e., DEP-4/1 and DEP-1).

10 PM to 12 Midnight – Cleaning Operations in Tank No. 5

An air sample (#013) was obtained immediately adjacent to the (top) entry hole to Tank No. 5 during cleaning operations (10:50 PM). This sample was initially screened on the GC/PID/ELCD, which indicated very low levels of contaminants. The remainder of the sample was then analyzed on the GC/MS, which confirmed these findings, with only trace levels for site contaminants PCE, TCE, and Toluene; 6.5 ppbV of Chloroethane (likely a sampling bag contaminant); and about 10 ppbV of an aliphatic compound tentatively identified as 2,4-Dimethylheptane.

Two additional samples obtained near the tank (#011 and #012) also contained similarly low levels of site contaminants, along with what appeared to be Hexane at about 10 ppbV.

These low levels are once again consistent with the PID meter readings in these areas (i.e., 100 to 200 ppbV), as well as PID sensor readings of < 100 ppbV in *AreaRAE* units DEP-2, DEP-3, and DEP-4/2.

It is stressed that the contaminant concentrations reported in Table 2 are from 1 liter “grab” samples of air, and are therefore a “snapshot in time”. More definitive information on the time-weighted concentrations of these chemicals will be obtained from the air sampling (“Summa”) canisters deployed by Prime Engineering, which were sampled continuously over an approximately 90 minute time period.

Thermo MIE pDR-1500 Dust and Aerosol Monitor

The dust and aerosol monitor was positioned in the same location from 8 PM to 12 Midnight, in the easterly (downwind) area of the facility, as shown on Figure 5.

Display readings from the monitor were periodically observed and recorded throughout the test period. All readings were very low, between 0 and 4.5 µg/m³ of total particulates.

RINSATE WATER IN BUILDING NO. 1

Wash water from power-washing operations in Building No. 1 was collected in a vacuum truck for off-site disposal. A sample of this water (from the northwest corner of the building) was obtained by agency staff and analyzed using a headspace screening technique. Trace levels (i.e., less than 2 µg/L) of a number of compounds were identified, including Toluene, Ethylbenzene, Xylenes, and Trimethylbenzenes. The only contaminant detected above trace levels was Chloroform, at an estimated concentration of 20 µg/L.

SUMMARY AND CONCLUSIONS

The pilot test was conducted in conformance with the 6/21/12 approval letter issued by MassDEP, during a time period when the winds were from the west/southwest.

Air quality was continuously monitored by agency staff during the pilot test, using a multi-level approach that included grab air samples analyzed by an on-site gas chromatograph/mass spectrometer. Only trace levels of contaminants were identified in the outdoor air downwind of invasive cleaning activities, well below concentrations of concern.

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174	
City or Town:	Framingham		Address:	General Chemical - 133 Leland Street				Location:
Date Sampled:	6/26/12	Time:	6:50 PM	Field ID:	005	Collector:	Fitzgerald	Upwind - Pre Pilot Test
Date Analyzed:	6/26/12	Time:	7:00 PM	Lab ID:	005	Analyst:	Fitzgerald	
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym	
	ppbV	µg/m³	ppbV	µg/m³				
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene	
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide	
Chloroethane	7.2	19.0	5	23	0.736	0.145	Ethyl Chloride	
Trichloromonofluoromethane	N.D.	N.D.	30	210	0	0	Freon 11	
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride	
Methylene Chloride	N.D.	N.D.	1	3.5	0	0	Dichloromethane	
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	1	7.7	0	0	Freon 113	
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0	0		
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	4	0	0	cis-1,2-Dichloroethene	
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane	
1,2-Dichloroethane	N.D.	N.D.	5	20	0	0	Ethylene Dichloride	
1,1,1-Trichloroethane	N.D.	N.D.	1	5.5	0	0	Methyl Chloroform	
Benzene	N.D.	N.D.	1	3.2	0	0		
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0	0	Tetrachloromethane	
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0	0	Propylene Dichloride	
Trichloroethylene	N.D.	N.D.	1	5.4	0	0	Trichloroethene	
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0		
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0		
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0		
Toluene	N.D.	N.D.	1	3.8	0.992	0.523		
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide	
Tetrachloroethylene	N.D.	N.D.	1	6.8	0	0	Perchloroethylene	
Chlorobenzene	N.D.	N.D.	1	4.6	0	0		
Ethylbenzene	N.D.	N.D.	1	4.3	0.984	0.264		
p/m-Xylene (see note)	N.D.	N.D.	1	4.3	0.979	0.385		
Styrene	N.D.	N.D.	1	4.3	0.993	0.547	Vinyl benzene	
o-Xylene	N.D.	N.D.	1	4.3	0.954	0.256		
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0		
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.754	0.114	Mesitylene	
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.971	0.201		
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0.721	0.06	m- Dichlorobenzene	
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0.719	0.051	o - Dichlorobenzene	
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0.715	0.059	p - Dichlorobenzene	
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0.908	0.257		
HexachloroButadiene	N.D.	N.D.	5	53	0	0		
¹Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.								
Instrument: HAPSITE Smart Plus GC/MS		Quality Control: 3-6 point cal w/ %RSD<30, Int Stds, daily blank, daily cal check						
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11	
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match								
COMMENTS: Chloroethane likely a bag or lab contaminant								

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174	
City or Town:	Framingham		Address:	General Chemical - 133 Leland Road				Location:
Date Sampled:	6/26/12	Time:	7:20 PM	Field ID:	006	Collector:	Fitzgerald	Downwind - Pre Pilot Test
Date Analyzed:	6/26/12	Time:	7:36 PM	Lab ID:	006	Analyst:	Fitzgerald	
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym	
	ppbV	µg/m³	ppbV	µg/m³				
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene	
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide	
Chloroethane	6.1	16.2	5	23	0.891	0.155	Ethyl Chloride	
Trichloromonofluoromethane	N.D.	N.D.	30	210	0	0	Freon 11	
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride	
Methylene Chloride	N.D.	N.D.	1	3.5	0	0	Dichloromethane	
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	1	7.7	0	0	Freon 113	
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0	0		
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	4	0	0	cis-1,2-Dichloroethene	
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane	
1,2-Dichloroethane	N.D.	N.D.	5	20	0	0	Ethylene Dichloride	
1,1,1-Trichloroethane	N.D.	N.D.	1	5.5	0	0	Methyl Chloroform	
Benzene	N.D.	N.D.	1	3.2	0	0		
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0	0	Tetrachloromethane	
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0	0	Propylene Dichloride	
Trichloroethylene	N.D.	N.D.	1	5.4	0	0	Trichloroethene	
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0		
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0		
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0		
Toluene	N.D.	N.D.	1	3.8	0.997	0.598		
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide	
Tetrachloroethylene	N.D.	N.D.	1	6.8	0.806	0.445	Perchloroethylene	
Chlorobenzene	N.D.	N.D.	1	4.6	0	0		
Ethylbenzene	N.D.	N.D.	1	4.3	0.997	0.328		
p/m-Xylene (see note)	N.D.	N.D.	1	4.3	0.977	0.326		
Styrene	N.D.	N.D.	1	4.3	0.971	0.449	Vinyl benzene	
o-Xylene	N.D.	N.D.	1	4.3	0.986	0.329		
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0		
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.93	0.143	Mesitylene	
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.93	0.159		
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0.78	0.055	m– Dichlorobenzene	
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0.78	0.045	o – Dichlorobenzene	
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0.78	0.055	p – Dichlorobenzene	
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0	0		
HexachloroButadiene	N.D.	N.D.	5	53	0	0		
¹Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.								
Instrument: HAPSITE Smart Plus GC/MS		Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal check						
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).								Last Calibration: 3/31/11
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match								
COMMENTS: Chloroethane likely a bag or lab contaminant								

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174	
City or Town:	Framingham		Address:	General Chemical - 133 Leland Street				Location:
Date Sampled:	6/26/12	Time:	8:15 PM	Field ID:	007	Collector:	Clark	Bldg No. 1 Pre Pilot Test
Date Analyzed:	6/26/12	Time:	8:28 PM	Lab ID:	007	Analyst:	Fitzgerald	
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym	
	ppbV	µg/m ³	ppbV	µg/m ³				
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene	
Bromomethane	N.D.	N.D.	5	22	0.909	0	Methyl Bromide	
Chloroethane	N.D.	N.D.	5	23	0.783	0.043	Ethyl Chloride	
Trichloromonofluoromethane	28.1	196.4	30	210	1	0.189	Freon 11	
1,1-Dichloroethene	0.3	1.0	1	4	0.913	0.101	Vinylidene Chloride	
Methylene Chloride	N.D.	N.D.	1	3.5	0.705	0.038	Dichloromethane	
1,1,2-Trichlorotrifluoroethane	35.2	269.9	1	7.7	0.997	0.345	Freon 113	
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0.752	0.007		
Cis 1,2-Dichloroethylene	36.3	144.0	1	4	0.968	0.738	cis-1,2-Dichloroethene	
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane	
1,2-Dichloroethane	N.D.	N.D.	5	20	0.94	0.046	Ethylene Dichloride	
1,1,1-Trichloroethane	10.8	58.7	1	5.5	0.983	0.685	Methyl Chloroform	
Benzene	N.D.	N.D.	1	3.2	0.909	0.092		
Carbon Tetrachloride	N.D.	N.D.	1	6.3	1	0.099	Tetrachloromethane	
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0.224	0.07	Propylene Dichloride	
Trichloroethylene	3.4	18.4	1	5.4	0.99	0.762	Trichloroethene	
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0		
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0.594	0.007		
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0		
Toluene	18.9	71.4	1	3.8	0.999	0.741		
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide	
Tetrachloroethylene	28.4	192.8	1	6.8	0.984	0.976	Perchloroethylene	
Chlorobenzene	N.D.	N.D.	1	4.6	0	0		
Ethylbenzene	0.8	3.6	1	4.3	0.999	0.648		
p/m-Xylene (see note)	2.0	8.6	1	4.3	0.999	0.626		
Styrene	N.D.	N.D.	1	4.3	0.999	0.368	Vinyl benzene	
o-Xylene	1.5	6.4	1	4.3	0.999	0.62		
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0.876	0.115		
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.981	0.164	Mesitylene	
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.999	0.446		
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0.9	0.201	m- Dichlorobenzene	
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0.904	0.178	o – Dichlorobenzene	
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0.901	0.201	p – Dichlorobenzene	
1,2,4-Trichlorobenzene	1.5	11.2	5	37	0.976	0.628		
HexachloroButadiene	N.D.	N.D.	5	53	0	0		
*Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.								
Instrument: HAPSITE Smart Plus GC/MS			Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal check					
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11	
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match								
COMMENTS: Large peaks tentatively indentified as Cyclohexane at approx 1700 ppbV; Acetone @ 500 ppbV, and 2/3 Methylpentanes at 800 ppbV total.								

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174
City or Town:	Framingham		Address:	General Chemical - 133 Leland Street			Location:
Date Sampled:	6/26/12	Time:	8:50 PM	Field ID:	008	Collector:	Clark
Date Analyzed:	6/26/12	Time:	9:13 PM	Lab ID:	008	Analyst:	Fitzgerald
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym
	ppbV	µg/m³	ppbV	µg/m³			
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide
Chloroethane	20.5	54.2	5	23	0.819	0.345	Ethyl Chloride
Trichloromonofluoromethane	N.D.	N.D.	30	210	0.903	0.018	Freon 11
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride
Methylene Chloride	N.D.	N.D.	1	3.5	0	0	Dichloromethane
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	1	7.7	0	0	Freon 113
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0	0	
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	4	0	0	cis-1,2-Dichloroethene
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane
1,2-Dichloroethane	N.D.	N.D.	5	20	0	0	Ethylene Dichloride
1,1,1-Trichloroethane	N.D.	N.D.	1	5.5	0	0	Methyl Chloroform
Benzene	N.D.	N.D.	1	3.2	0	0	
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0	0	Tetrachloromethane
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0	0	Propylene Dichloride
Trichloroethylene	N.D.	N.D.	1	5.4	0	0	Trichloroethene
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0	
Toluene	0.3	1.0	1	3.8	0.997	0.671	
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide
Tetrachloroethylene	N.D.	N.D.	1	6.8	0.834	0.583	Perchloroethylene
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	
Ethylbenzene	N.D.	N.D.	1	4.3	0.93	0.248	
p/m-Xylene (see note)	N.D.	N.D.	1	4.3	0.952	0.359	
Styrene	N.D.	N.D.	1	4.3	0	0	Vinyl benzene
o-Xylene	N.D.	N.D.	1	4.3	0.949	0.22	
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0	
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.958	0.214	Mesitylene
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.965	0.216	
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0	0	m- Dichlorobenzene
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0	0	o - Dichlorobenzene
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0	0	p - Dichlorobenzene
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0.867	0.172	
HexachloroButadiene	N.D.	N.D.	5	53	0	0	
¹ Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.							
Instrument: HAPSITE Smart Plus GC/MS			Quality Control: 3-6 point cal w/ %RSD<30, Int Stds, daily blank, daily cal check				
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match							
COMMENTS: Chlorethane likely a bag/lab contaminant							

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA		RTN: 3-19174	
City or Town:	Framingham		Address:	General Chemical - 133 Leland Road			Location:
Date Sampled:	6/26/12	Time:	9:00 PM	Field ID:	009	Collector:	Fitzgerald
Date Analyzed:	6/26/12	Time:	9:48 PM	Lab ID:	009	Analyst:	Fitzgerald
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym
	ppbV	µg/m³	ppbV	µg/m³			
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide
Chloroethane	42.6	112.5	5	23	0.766	0.264	Ethyl Chloride
Trichloromonofluoromethane	35.4	247.3	30	210	0.999	0.249	Freon 11
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride
Methylene Chloride	N.D.	N.D.	1	3.5	0.561	0.061	Dichloromethane
1,1,2-Trichlorotrifluoroethane	44.4	339.8	1	7.7	0.998	0.443	Freon 113
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0.752	0.007	
Cis 1,2-Dichloroethylene	37.8	149.9	1	4	0.968	0.738	cis-1,2-Dichloroethene
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane
1,2-Dichloroethane	N.D.	N.D.	5	20	0.955	0.04	Ethylene Dichloride
1,1,1-Trichloroethane	13.5	73.8	1	5.5	0.989	0.689	Methyl Chloroform
Benzene	0.5	1.6	1	3.2	0.799	0.105	
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0.979	0.066	Tetrachloromethane
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0.251	0.015	Propylene Dichloride
Trichloroethylene	5.4	28.7	1	5.4	0.983	0.738	Trichloroethene
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0	
Toluene	19.5	73.4	1	3.8	0.999	0.739	
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide
Tetrachloroethylene	30.9	209.4	1	6.8	0.979	0.961	Perchloroethylene
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	
Ethylbenzene	1.1	4.9	1	4.3	0.992	0.479	
p/m-Xylene (see note)	2.1	9.0	1	4.3	0.994	0.612	
Styrene	28.2	120.0	1	4.3	0.998	0.655	Vinyl benzene
o-Xylene	1.9	8.4	1	4.3	0.983	0.211	
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0	
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.906	0.321	Mesitylene
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.998	0.319	
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0	0	m- Dichlorobenzene
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0	0	o – Dichlorobenzene
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0	0	p – Dichlorobenzene
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0	0	
HexachloroButadiene	N.D.	N.D.	5	53	0	0	
¹Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.							
Instrument: HAPSITE Smart Plus GC/MS			Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal check				
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match							
COMMENTS: sample was diluted by a factor of 10; results indicate values after multiplying results by 10. Large peaks tentatively identified as Cyclohexane @ 3000 ppbV; Acetone @ 600 ppbV; 2/3 Methylpentane at 500 ppbV. 2-Butoxyethanol tentatively identified at 20 ppbV.							

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174
City or Town:	Framingham		Address:	General Chemical - 133 Leland Street			Location:
Date Sampled:	6/26/12	Time:	9:35 PM	Field ID:	010	Collector:	Clark
Date Analyzed:	6/26/12	Time:	10:22 PM	Lab ID:	010	Analyst:	Fitzgerald
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym
	ppbV	µg/m ³	ppbV	µg/m ³			
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide
Chloroethane	N.D.	N.D.	5	23	0.757	0.09	Ethyl Chloride
Trichloromonofluoromethane	N.D.	N.D.	30	210	0	0	Freon 11
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride
Methylene Chloride	N.D.	N.D.	1	3.5	0	0	Dichloromethane
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	1	7.7	0	0	Freon 113
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0	0	
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	4	0	0	cis-1,2-Dichloroethene
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane
1,2-Dichloroethane	N.D.	N.D.	5	20	0	0	Ethylene Dichloride
1,1,1-Trichloroethane	N.D.	N.D.	1	5.5	0	0	Methyl Chloroform
Benzene	N.D.	N.D.	1	3.2	0.981	0.304	
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0	0	Tetrachloromethane
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0	0	Propylene Dichloride
Trichloroethylene	N.D.	N.D.	1	5.4	0	0	Trichloroethene
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0	
Toluene	0.3	1.2	1	3.8	0.999	0.673	
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide
Tetrachloroethylene	N.D.	N.D.	1	6.8	0.712	0.519	Perchloroethylene
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	
Ethylbenzene	N.D.	N.D.	1	4.3	0.965	0.27	
p/m-Xylene (see note)	N.D.	N.D.	1	4.3	0.998	0.47	
Styrene	N.D.	N.D.	1	4.3	0.998	0.538	Vinyl benzene
o-Xylene	N.D.	N.D.	1	4.3	0.975	0.241	
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0	
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.988	0.327	Mesitylene
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.991	0.327	
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0.667	0.021	m- Dichlorobenzene
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0.71	0.015	o - Dichlorobenzene
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0.663	0.021	p - Dichlorobenzene
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0	0	
HexachloroButadiene	N.D.	N.D.	5	53	0	0	
¹ Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.							
Instrument: HAPSITE Smart Plus GC/MS				Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal check			
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match							
COMMENTS:							

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174
City or Town:	Framingham		Address:	General Chemical - 133 Leland Street			Location:
Date Sampled:	6/26/12	Time:	11:00 PM	Field ID:	011	Collector:	Fitzgerald
Date Analyzed:	6/26/12	Time:	11:07 PM	Lab ID:	011	Analyst:	Fitzgerald
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym
	ppbV	µg/m³	ppbV	µg/m³			
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide
Chloroethane	N.D.	N.D.	5	23	0.743	0.071	Ethyl Chloride
Trichloromonofluoromethane	N.D.	N.D.	30	210	0	0	Freon 11
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride
Methylene Chloride	N.D.	N.D.	1	3.5	0	0	Dichloromethane
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	1	7.7	0	0	Freon 113
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0	0	
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	4	0	0	cis-1,2-Dichloroethene
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane
1,2-Dichloroethane	N.D.	N.D.	5	20	0	0	Ethylene Dichloride
1,1,1-Trichloroethane	N.D.	N.D.	1	5.5	0.996	0.258	Methyl Chloroform
Benzene	N.D.	N.D.	1	3.2	0.985	0.37	
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0	0	Tetrachloromethane
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0	0	Propylene Dichloride
Trichloroethylene	0.3	1.7	1	5.4	0.987	0.744	Trichloroethene
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0	
Toluene	0.3	1.1	1	3.8	1	0.704	
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide
Tetrachloroethylene	0.3	2.2	1	6.8	0.952	0.822	Perchloroethylene
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	
Ethylbenzene	N.D.	N.D.	1	4.3	0.995	0.482	
p/m-Xylene (see note)	N.D.	N.D.	1	4.3	0.961	0.462	
Styrene	N.D.	N.D.	1	4.3	0.996	0.485	Vinyl benzene
o-Xylene	N.D.	N.D.	1	4.3	0.984	0.304	
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0	
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.782	0.144	Mesitylene
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.953	0.278	
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0	0	m- Dichlorobenzene
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0	0	o – Dichlorobenzene
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0	0	p – Dichlorobenzene
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0	0	
HexachloroButadiene	N.D.	N.D.	5	53	0	0	
¹Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.							
Instrument: HAPSITE Smart Plus GC/MS			Quality Control: 3-6 point cal w/ %RSD<30, Int Stds, daily blank, daily cal check				
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match							
COMMENTS:							

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174
City or Town:	Framingham		Address:	General Chemical - 133 Leland Road			Location:
Date Sampled:	6/26/12	Time:	11:10 PM	Field ID:	012	Collector:	Fitzgerald
Date Analyzed:	6/26/12	Time:	11:43 PM	Lab ID:	012	Analyst:	Fitzgerald
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym
	ppbV	µg/m³	ppbV	µg/m³			
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide
Chloroethane	2.4	6.4	5	23	0.923	0.182	Ethyl Chloride
Trichloromonofluoromethane	N.D.	N.D.	30	210	0.984	0.114	Freon 11
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride
Methylene Chloride	N.D.	N.D.	1	3.5	0	0	Dichloromethane
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	1	7.7	0.763	0.094	Freon 113
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0	0	
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	4	0.907	0.057	cis-1,2-Dichloroethene
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane
1,2-Dichloroethane	N.D.	N.D.	5	20	0.814	0.003	Ethylene Dichloride
1,1,1-Trichloroethane	0.5	2.8	1	5.5	0.994	0.701	Methyl Chloroform
Benzene	N.D.	N.D.	1	3.2	0	0	
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0.845	0.047	Tetrachloromethane
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0	0	Propylene Dichloride
Trichloroethylene	N.D.	N.D.	1	5.4	0.987	0.678	Trichloroethene
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0	
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0	
Toluene	N.D.	N.D.	1	3.8	0.997	0.601	
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide
Tetrachloroethylene	0.5	3.5	1	6.8	0.938	0.859	Perchloroethylene
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	
Ethylbenzene	N.D.	N.D.	1	4.3	0.869	0.178	
p/m-Xylene (see note)	N.D.	N.D.	1	4.3	0.96	0.286	
Styrene	N.D.	N.D.	1	4.3	0	0	Vinyl benzene
o-Xylene	N.D.	N.D.	1	4.3	0.852	0.137	
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0	
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.98	0.192	Mesitylene
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.984	0.193	
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0	0	m- Dichlorobenzene
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0	0	o – Dichlorobenzene
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0	0	p – Dichlorobenzene
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0	0	
HexachloroButadiene	N.D.	N.D.	5	53	0	0	
¹Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.							
Instrument: HAPSITE Smart Plus GC/MS			Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal check				
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match							
COMMENTS: Chloroethane likely a bag/lab contaminant							

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA			RTN: 3-19174	
City or Town:	Framingham		Address:	General Chemical - 133 Leland Street				Location:
Date Sampled:	6/26/12	Time:	10:50 PM	Field ID:	013	Collector:	Clark	Top Tank 5 during pilot
Date Analyzed:	6/27/12	Time:	12:15 AM	Lab ID:	001	Analyst:	Fitzgerald	
Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Synonym	
	ppbV	µg/m³	ppbV	µg/m³				
Vinyl Chloride	N.D.	N.D.	5	13	0	0	Chloroethene	
Bromomethane	N.D.	N.D.	5	22	0	0	Methyl Bromide	
Chloroethane	6.5	17.1	5	23	0.897	0.254	Ethyl Chloride	
Trichloromonofluoromethane	N.D.	N.D.	30	210	0.939	0.163	Freon 11	
1,1-Dichloroethene	N.D.	N.D.	1	4	0	0	Vinylidene Chloride	
Methylene Chloride	N.D.	N.D.	1	3.5	0	0	Dichloromethane	
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	1	7.7	0.642	0.114	Freon 113	
1,1-Dichloroethane	N.D.	N.D.	1	4.1	0	0		
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	4	0	0	cis-1,2-Dichloroethene	
Chloroform	N.D.	N.D.	1	4.9	0	0	Trichloromethane	
1,2-Dichloroethane	N.D.	N.D.	5	20	0	0	Ethylene Dichloride	
1,1,1-Trichloroethane	N.D.	N.D.	1	5.5	0	0	Methyl Chloroform	
Benzene	N.D.	N.D.	1	3.2	0	0		
Carbon Tetrachloride	N.D.	N.D.	1	6.3	0	0	Tetrachloromethane	
1,2-Dichloropropane	N.D.	N.D.	1	4.6	0	0	Propylene Dichloride	
Trichloroethylene	0.6	3.3	1	5.4	0.992	0.787	Trichloroethene	
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0		
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.5	0	0		
1,1,2-Trichloroethane	N.D.	N.D.	1	5.5	0	0		
Toluene	0.3	1.0	1	3.8	0.995	0.716		
1,2-Dibromoethane	N.D.	N.D.	1	7.7	0	0	Ethylene Dibromide	
Tetrachloroethylene	0.3	1.7	1	6.8	0.876	0.739	Perchloroethylene	
Chlorobenzene	N.D.	N.D.	1	4.6	0	0		
Ethylbenzene	N.D.	N.D.	1	4.3	0.953	0.279		
p/m-Xylene (see note)	N.D.	N.D.	1	4.3	0.985	0.542		
Styrene	N.D.	N.D.	1	4.3	0.98	0.437	Vinyl benzene	
o-Xylene	N.D.	N.D.	1	4.3	0.997	0.406		
1,1,2,2-Tetrachloroethane	N.D.	N.D.	5	34	0	0		
1,3,5-Trimethylbenzene	N.D.	N.D.	5	25	0.797	0.126	Mesitylene	
1,2,4-Trimethylbenzene	N.D.	N.D.	5	25	0.949	0.248		
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30	0	0	m– Dichlorobenzene	
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30	0	0	o – Dichlorobenzene	
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30	0	0	p – Dichlorobenzene	
1,2,4-Trichlorobenzene	N.D.	N.D.	5	37	0	0		
HexachloroButadiene	N.D.	N.D.	5	53	0	0		
¹ Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.								
Instrument: HAPSITE Smart Plus GC/MS		Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal check						
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Limit).							Last Calibration: 3/31/11	
Peak Fit=agreement w/ spectral database; Peak Purity=interference from coeluting compounds. Fit >0.5 likely, >0.85 very likely match								
COMMENTS: Chloroethane likely a bag/lab contaminant								